

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A fruit or vegetable coated with a plant protective coating comprising lipophilic thixotropic smectic clay and a wax emulsion.
2. The fruit or vegetable of Claim 1 wherein the wax emulsion comprises a matrix of complex hydrocarbons, an emulsifying agent and water.
3. The fruit or vegetable of Claim 2 wherein the emulsifying agent comprises an anionic lipophilic emulsifier and an ionic hydrophilic emulsifier.
4. The fruit or vegetable of Claim 1 wherein the wax emulsion comprises an edible synthetic oxygen containing wax, an emulsifying agent and water.
5. The fruit or vegetable of Claim 1 wherein the plant protective coating comprises about 0.5 to 10% (weight/weight) lipophilic thixotropic smectic clay and about 90 to 99.5% wax emulsion.
6. The fruit or vegetable of Claim 3 wherein the matrix of complex hydrocarbons comprises a wax mixture comprising long chain fatty acids and long chain esters.
7. The fruit or vegetable of Claim 6 wherein the wax mixture is a natural wax selected from the group consisting of Carnauba wax, Candelilla wax, Alfa wax, montan wax, rice-bran wax, beeswax, Japan wax and mixtures thereof.
8. The fruit or vegetable of Claim 3 wherein the anionic lipophilic emulsifier is selected from the group consisting of oleic acid, stearic acid and mixtures thereof.
9. The fruit or vegetable of Claim 3 wherein the ionic hydrophilic emulsifier is selected from the group consisting of ethanolamine, diethanolamine, triethanolamine, alkyl alcohol amine, morpholine and mixtures thereof.
10. The fruit or vegetable of Claim 5 wherein the protective coating mixture is diluted into an aqueous solution in a volume/volume ratio of from about 1

part protective coating mixture to about 1 part aqueous solution to about 1 part protective coating mixture to 10 parts aqueous solution.

11. A plant protective composition comprising:  
about 0.5 to 10% (weight/weight) lipophilic thixotropic smectic clay, and  
about 90 to 99.5% (weight/weight) wax emulsion, said emulsion comprising:  
about 5 to 10% (weight/weight) natural wax selected from the group consisting of Carnauba wax, Candelilla wax, Alfa wax, montan wax, rice-bran wax, beeswax, Japan wax and mixtures thereof;  
about 1 to 15% (weight/weight) oleic acid;  
about 1 to 15% (weight/weight) morpholene; and  
about 60 to 93% water.
12. A method of protecting a plant from sunburn, comprising treating said plant with a sunburn preventative amount of a plant protective composition comprising lipophilic thixotropic smectic clay and a wax emulsion.
13. The method of Claim 12 wherein the treated plant is selected from the group consisting of apple, pear, tomato, pepper, curburbit, honeydew melon, cantaloupe, avocado, plum, bean, squash, peach, grape, strawberry, raspberry, gooseberry, banana, orange, tulip, onion, cabbage, maple tree, basswood tree, boxelder tree, black walnut tree, birch tree, balsam fir, Douglas fir, Eastern white pine and spruce.
14. The method of Claim 12 wherein the wax emulsion comprises a matrix of complex hydrocarbons, an emulsifying agent and water.
15. The method of Claim 12 wherein the wax emulsion comprises an edible synthetic oxygen containing wax, an emulsifying agent and water.
16. The method of Claim 12 wherein the plant protective composition comprises about 0.5 to 10% (weight/weight) lipophilic thixotropic smectic clay and about 90 to 99.5% of the wax emulsion.
17. The method of Claim 14 wherein the emulsifying agent comprises an anionic lipophilic emulsifier and an ionic hydrophilic emulsifier.

18. The method of Claim 14 wherein the matrix of complex hydrocarbons comprises a wax mixture comprising long chain fatty acids and long chain fatty alcohol esters.

19. The method of Claim 17 wherein the anionic lipophilic surfactant is selected from the group consisting of oleic acid, stearic acid and mixtures thereof.

20. The method of Claim 17 wherein the ionic hydrophilic emulsifier is selected from the group consisting of ethanolamine, diethanolamine, triethanolamine, alkyl alcohol amine, morpholine and mixtures thereof.

21. The method of Claim 17 wherein the plant protective composition is diluted into an aqueous solution prior to treating the plant.

22. The method of Claim 18 wherein the wax mixture is a natural wax selected from the group consisting of Carnauba wax, Candelilla wax, Alfa wax, montan wax, rice-bran wax, beeswax, Japan wax and mixtures thereof.

23. The method of Claim 16 wherein the plant protective composition is diluted into an aqueous solution in a volume/volume ratio of from about 1 part protective coating mixture to about 1 part aqueous solution to about 1 part protective coating mixture to 10 parts aqueous solution.

24. The method of Claim 12 wherein the plant is treated by spraying the composition onto the surface of the plant.

25. The method of Claim 24 wherein the composition is sprayed with an application rate of about 100 to 500 gallons per acre.

26. The method of Claim 24 wherein the composition is sprayed onto the plant multiple times.

27. A method of protecting a plant from insect damage comprising treating a plant with an insect-controlling amount of a plant protective composition comprising lipophilic thixotropic smectic clay and a wax emulsion.

28. The method of Claim 27 wherein the treated plant is selected from the group consisting of apple, pear, tomato, pepper, curburbit, honeydew melon,

cantaloupe, avocado, plum, bean, squash, peach, grape, strawberry, raspberry, gooseberry, banana, orange, tulip, onion, cabbage, potato, pea, lentil, apricot, cherry, onion, maple tree, basswood tree, boxelder tree, black walnut tree, birch tree, balsam fir, Douglas fir, Eastern white pine and spruce.

29. The method of Claim 27 wherein the wax emulsion comprises a matrix of complex hydrocarbons, an emulsifying agent and water.

30. The method of Claim 27 wherein the wax emulsion comprises an edible synthetic oxygen containing wax, an emulsifying agent and water.

31. The method of Claim 27 wherein the plant protective composition comprises about 0.5 to 10% (weight/weight) lipophilic thixotropic smectic clay and about 90 to 99.5% wax emulsion.

32. The method of Claim 29 wherein the emulsifying agent comprises an anionic lipophilic emulsifier and an ionic hydrophilic emulsifier.

33. The method of Claim 29 wherein the matrix of complex hydrocarbons comprises a wax mixture comprising long chain fatty acids and long chain fatty alcohol esters.

34. The method of Claim 32 wherein the anionic lipophilic surfactant is selected from the group consisting of oleic acid, stearic acid and mixtures thereof.

35. The method of Claim 32 wherein the ionic hydrophilic emulsifier is selected from the group consisting of ethanolamine, diethanolamine, triethanolamine, alkyl alcohol amine, morpholine and mixtures thereof.

36. The method of Claim 32 wherein the plant protective composition is diluted into an aqueous solution prior to treating the plant.

37. The method of Claim 33 wherein the wax mixture is a natural wax selected from the group consisting of Carnauba wax, Candelilla wax, Alfa wax, montan wax, rice-bran wax, beeswax, Japan wax and mixtures thereof.

38. The method of Claim 31 wherein the plant protective composition is diluted into an aqueous solution in a volume/volume ratio of from about 1 part

protective coating mixture to about 1 part aqueous solution to about 1 part protective coating mixture to 10 parts aqueous solution.

39. The method of Claim 27 wherein the plant is treated by spraying the composition onto the surface of the plant.

40. The method of Claim 39 wherein the composition is sprayed with an application rate of about 100 to 500 gallons per acre.

41. The method of Claim 39 wherein the composition is sprayed onto the plant multiple times.